More About Baldness. See page 329.
The Weather and Health. See page 326.

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A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XII.—No. 307. FRIDAY, FEBRUARY 22, 1889. [PRICE TWOPENCE.

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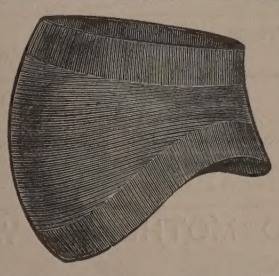

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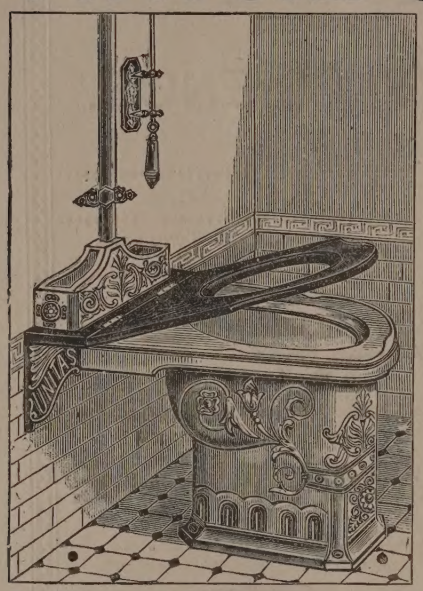

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◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, FEBRUARY* 22, 1889.

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Notes by the Way

By the Editor.

"Health is the foundation of all our physical happiness."—*Herder.*

"Beef-Tea,"—that sheet-anchor of invalid-dietary, has from time to time been warmly criticized in respect of its nourishing powers. Dr. Thomas Laffan, in a paper read at the Glasgow meeting of the British Medical Association, raised this important question once again, and warns us against the "exaggerated estimate of the value of beef-tea." He says that "with regard to its value as a nutrient, we may fairly take Liebig for our authority. His every interest was in favour of exaggerating its merits, and his eminence as a chemist specially qualified him to offer an opinion. He states that the greatest care is taken to exclude from his extract all fibrine, gelatine, albumen, and fat. He further adds that its component parts do not give strength where there is none, and that it merely acts on our nerves so that we become conscious of our existing strength. The same authority confesses that to extractives and salts is due all the value it possesses; that it is to be classed with tea and coffee; and that it neither economizes carbon for our temperature, nor nitrogen for the sustenance of our tissues. As to the difference between ordinary beef-tea and his extract of meat, he merely claims for the latter that it contains less water than the former. Another standard authority, M. Sée, tells us that beef-tea contains very little albumen and very little carbo-hydrates. That the glycogenic matter, the inosite, the sugar, and the lactic acid that belong to fresh meat are altogether altered in beef-tea. As to fats, they are almost eliminated."

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So far beef-tea, then, figures simply as a stimulant, and by no means ranks as a true food. M. Sée, of Paris, declares in favour of milk. He holds that if the strongest beef-tea were to replace milk for a convalescent man, "the result would be disastrous." Dr. Laffan then goes on to remind us, in connection with the discovery of Mühlhein, that peptones (or the nitrogenous foods as they are altered by the gastric juice of the stomach), when injected into the veins, produce a soporific effect. "I may mention," he says, "that cold beef-tea, when prepared so as to contain a percentage of albumen, has been found by me, when administered to sleepless patients, to produce a distinct narcotic effect. I do not aver that this result has been attained in every instance, but the effect has in some cases been too pronounced to escape note. Dr. Brunton found that the urine of a healthy man contained all, or nearly all, the albumen that he had ingested but a few minutes before. He added that the albumen in the case was simply absorbed by the stomach and intestines, that it passed without change through the portal system, and was then eliminated by the kidneys, just as sugar would be under like circumstances. He then goes on to raise the question whether, on this account, beef-tea may not be frequently injurious, or even actually poisonous."

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"Dr. Hassall long ago," says Dr. Laffan, "showed that 14½ pounds of beef would be required to yield beef-tea enough to supply the nitrogenous daily waste of one individual, calculating that such waste amounts to 512 grains of urea and 21 of uric acid daily. Experiments made on dogs have brought out the remarkable fact that they die sooner when fed exclusively on Liebig's extract than when left unfed." Add to this that patients soon tire of beef-tea, and it can easily be shown that this time-honoured form of nutriment must be deposed from the high pedestal whereon it has hitherto been placed.

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Mr. Jessopp's method of preparing beef for invalids is referred to by our critic. This method proceeds on a different basis, the resultant of which is not properly beef-tea at all, but consists of crushed beef boiled and suspended in water. He lays down the proposition that the essence of the meat resides in its fibre, and not in its salts; and that this fibre must be thoroughly pulpified and suspended in a large proportionate quantity of water, so as to suit the requirements of a patient who is incapable of mastication, and who can only swallow fluid food. He allows only one pound (or one-fourth the standard quantity) to four pints of water, and simmers it for five or six hours. He then strains the entire; but if any portion be not small enough to pass through the colander, it is further broken up until it is enabled to do so. He makes his beef-tea from rump beef. This article is infinitely richer than ordinary beef-tea; but where solid food is inadmissible, its administration seems to me to require further investigation.

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Even of this improved beef-tea, Dr. Laffan does not thoroughly approve. An analysis gave over 94 parts in 100 parts, with only 4·25 parts of nitrogenous products, for the presence of which, of course, we especially value beef-tea and like foods. Thus failing to find in beef-tea a suitable food for the sick, Dr. Laffan tells us that he relies on milk. His own words are:—"The first and chief resource seems to be milk, the richness of which in albumen, fat, sugar, and salts marks it out as pre-eminently suited for the supply of the necessary nutriment during what we shall call the interregnum. The digestive weakness which hinders the use of solid meat is a mere approximation or return to that of the infantile state. We know that the wants of this are fully supplied by milk; we know also that this is the only nutriment with which its powers are able to cope."

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In addition, he mentions Trousseau's plan of giving minced raw meat; but nutritious as this diet may be, it entails a risk of parasitic (tape-worm) infestation, which, to my mind, more than counterbalances any good effects it may produce. In remarking on Dr. Laffan's important paper, I might add that milk is not a typical food for the healthy adult, who demands somewhat different proportions of its constituents from those demanded by, and which are eminently suitable for, the child. It may be that a sick or convalescent adult is liker the child in respect of his digestive wants than the healthy adult; and in that case, milk, especially when peptonized or pre-digested (by means of Fairchild's powders), may form a valuable and nutritious form of diet.

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But there will always be a preference for a food rich in nitrogenous products for the sick. There is much nitrogenous waste in illness, and we require a full supply of easily digested nitrogenous food to repair that waste. Hence, why does Dr. Laffan neglect the excellent beef essences which are now in the market. Is anything better than Brand's Essence of Beef, for example, either as regards the proportions of its products, constituting it a perfect food, or its agreeable taste? If we are to reject beef-tea, we need not on that account reject beef itself, properly prepared, as a food for the sick, and in the beef essence just named all the nutritive properties of meat will be found present. This, I am convinced, is after all the true solution of the vexed beef-tea question.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE WEATHER AND HEALTH.

By Dr. Andrew Wilson.

(Concluded.)

Continuing our examination of the relations between the weather and the mortality from certain diseases, we find evidence that *surgical fever*, or the fever which succeeds operations, is materially affected by meteorological conditions. Dr. Richardson says that the following states increase the risks of an operation: when the barometer is steadily falling, and when it is steadily low; when the wet-bulb thermometer approaches the dry bulb within two or three degrees; when, with a low barometical pressure and approach to unity of reading of the two thermometers, there is a mean temperature above 45 degs. Fahr. and under 55 degs. Fahr.; and when the wind is south or south-west. On the other hand, when the barometer is steadily rising, and steadily high; when the wet bulb shows a reading of five degrees lower than the dry bulb; when, with a high barometer and a difference of five degrees in the two thermometers, there is a mean temperature at or above 55 degs. Fahr.; and when the wind is west or north-west, the time is favourable for operations.

Dr. Hewson, from his experience in the Pennsylvanian Hospital, says that a dry air and a high barometical pressure are conditions which favour death from surgical "shock"; these states being opposed to the conditions which are associated with fatal surgical fever. His words are: "We obtained a mortality when the operation was performed with the barometer ascending of 10·7 per cent.; of 20·6 per cent. with it stationary; and 28·4 per cent. with it descending."

Speaking of seasonal variations in relation to the death-rate from various well-known diseases, Sir Arthur Mitchell, M.D., and Mr. Buchan, as remarked in our last article, have added very largely to our knowledge of the relations of the weather and health. *Small-pox* is thus found, for a period of thirty years (1845 to 1874), to prevail more from November to May than from May to November, The curve in the diagram of small-pox—with a straight line for the mean weekly death-rate—rises above the straight line with various ups and downs (high in January, April, and May) from the beginning of the year till the end of June. Then it sinks below the line, and is lowest at the end of September, beginning its rise in October, and reaching the line in December, to rise still higher, as we have noted, in January. In Sweden the same results have been noted.

For *Measles* there is a double curve from the straight line. The mortality curve, high in January, declines in that month; it is low in February and March; rises above the mean in May and June; sinks in July, August, and September; begins to rise in October; and in November and December reaches its height. There is a rapid decline from Christmas to the middle of February, when, as Dr. Fox remarks, the weekly deaths (for London) fall from forty-two to twenty-one. The period of the recurrence of epidemics of measles is about every five or six years.

Whooping Cough is decidedly affected by extremes of heat and cold. Its curve shows a simple prevalence from January to April; a decline in May; and a low mortality

till November and December, when it begins to rise. It is thus an early spring and winter ailment.

For *Scarlet Fever* the curve is really the opposite of that of whooping cough. Thus it is low from January to August, when it is below the line. Then it rises, and in October and November attains its greatest height, sinking in December, and then going below the line for the beginning of the year. In England, the returns show an increase in the last six months of the year; and in Dublin it is a fatal disease during the last quarter of each year. In Sweden it is least prevalent in August, and most so in November. Dr. Ransome says a small wave of scarlet fever occurs about once in every five years, and a great wave every fifteen or twenty years.

Typhus Fever is a disease produced by overcrowding. It prevails in the cold weather, when its cause is most likely to be exerted in full force among the poor; although in Glasgow in 1847 there was a marked epidemic in July. The curve of typhus is irregular. It has its ups and downs throughout the year. There are, perhaps, two great and decided increases of mortality from this disease in the early months of the year, and one, less decided, in the height of summer. The curve drawn by Sir A. Mitchell and Mr. Buchan is high from January to April, low in May and June, inclined to rise in July, falling in August and September, rising sharply in October, about level in November, and falling in December, with a rise for January.

Typhoid Fever, or "Gastric Fever," as it is also named, is known in America as "Fall Fever," from its prevalence in autumn. The London curve shows a decided rise from September to December, with a level in January and February, and a decided lowness from March to July; the curve rising in August for the September prevalence. For the *Diarrhœa* of adults—closely related to typhoid fever in many ways—Dr. Ransome says a mean temperature above 60 degs. predisposes to this disease when continuous, and causes a rapid increase in the number of cases. Below 60 degs. the temperature appears to be unfavourable to its progress.

Cholera (British) reaches its height in September, and then begins to decline: dysentery and Asiatic cholera appear to attain their maximum about a month later.

Consumption is said to be represented in London alone by about 148 deaths every week. Its curve is above the line from January to June, and below the line from July to October, with a rise in November and December.

For *Hydrophobia* the table is singular in some respects. Thus, in a table showing us the maximum of five deaths per week, we find the rises to be represented in January (three deaths); February (two deaths); March, April, and May low; June high (four deaths); July (three deaths); August very high (five deaths); September fairly high; October low; November low; and December high (five deaths). Thus it would seem the last month of the year rivals August in its maximum of cases of this disease; and it is doubtless true that hot weather alone does not wholly influence dogs, as is commonly believed.

Erysipelas (or "Rose") has its maximums in the early and later parts of the year; and *Puerperal* (or *Childbed*) *Fever* agrees with erysipelas in this respect. For *Insanity* the curves are highest in December and January, June, and in March and April. *Rheumatism* and *Pericarditis* (an affection of the heart-sac, largely dependent on rheumatism) increase in November and December; are fairly high also in spring; and decline in June, July, and August.

There is, however, no more striking fact regarding the relations of mortality and the weather than is afforded by the *influence of hot weather on children under one year old*. If we make a diagram showing the curves of the death-rates for both sexes, and for all causes, we speedily discover a very astonishing and pregnant fact in so far as infants under one year old are concerned. For while the deaths (calculated for London) are high in January, and higher still in February, owing to cold weather, the death-rate falls markedly in March, April, May, and June. Then in July and August we are met by a veritable hill of mortality, so sharply does the curve run up to about 1,600 deaths per week; the curve falling again at the end of August and in September, to rise gradually in October, November, and December, the latter month showing a death-rate of 1,700 per week.

What is it which renders the middle of the year and the hot weather so fatal to infants under one year old, when from one to five years there is no such mountain of death represented in the curve of mortality? The answer is, that for children under twelve months old, *Infantile Diarrhœa*, or "Infant Cholera," as it is also named, is the one great cause of this "massacre of the innocents." This disease is favoured by the hot weather, but it is perhaps nearer the truth to say that its direct cause is errors in diet. Children fed on starchy foods are singularly liable to be carried off by infantile diarrhœa, and we may set down the great mortality of young infants to this cause.

Dr. Farr tells us that out of every 1,000 children born, 149 on an average succumb before the first year of life is reached, and this rate varies greatly in different places. Out of every 1,000 children born, 263 on an average die in the first five years of life; but in so-called healthy districts only 175 die; while in Liverpool 460 perish. These figures tell their own tale about the influence of weather upon health, but they also teach us that, despite meteorological conditions, we have to reckon with ignorance and carelessness in the feeding and clothing of infants, as marked factors in keeping up the death-rate of early life.

As regards deaths of persons of other ages, with reference to the seasons of the year, it would seem that, according to Dr. Fox, cold and heat together are the great destroyers of infant life in London; while it is cold and not heat which kills off the aged in that city. Again, female deaths are most frequent in the period when diseases of the lungs are most in vogue; while females have a lower death-rate than males when nervous diseases predominate. One point of interest in connection with heat and cold, is found in the fact that in London, according to the figures of the Registrar-General, about 400 persons die per week of bronchitis when the temperature falls from 45 degs. to 27 degs.

Even the matter of air-pressure, as gauged by the barometer, is seen to be correlated in certain remarkable points to health and disease. Thus, that a rapid diminution in the pressure of the air is associated with seizures of apoplexy is a medical fact, the explanation probably being found in the engorgement of the minute blood-vessels of the brain which follows such a rapid atmospheric change. The most intimate structures of our bodies are affected by the weather, equally with the frame as a whole, and with its more pronounced organs and functions. Thus it is related that the voice of Grassini, the famous singer, was lowered nearly an octave when she visited England. The normal pitch was restored, however, on her return to Italy.

That the aching of joints and of corns is a condition

intimately associated with weather-changes is a well-known fact. Probably, along with interference with the action of the skin, we may find atmospheric changes to affect directly the joints themselves, and thus produce the pains alluded to. Jenner, remarking on the signs of rain, says:

"Hark! how the chairs and tables crack,
Old Betty's joints are on the rack."

And it is doubtless true that decreased air-pressure has much to do with the production of the condition above noted. When the air-pressure is low, and the air loaded with moisture, heat is not readily removed by evaporation from any ailing part. The blood-vessels, which expand freely under such circumstances, in parts not confined within dense textures (such as bones), are limited in their expansion in the case of joints. Hence with want of room to expand, the blood-vessels press on the nerves, and pain is the result. An aching tooth is as good an example of this fact as a rheumatic joint.

On the whole, then, the question of the weather and health is well worth special study; and the more so, inasmuch as a knowledge of the conditions which threaten our health is the first, and indeed only, step we can take for averting the diseases which attack us, and too often kill us, as things are.

"I FIND, madam," said a young physician, "that your husband is suffering from overwork." "And will he have to give up his place under the government?" she asked anxiously. "What's that? Is he a government official?" "Yes, sir." "H-m! I'll diagnose his case again. He probably needs exercise."

MATCH-MAKING.—A correspondent writes to us to inquire whether the *employés* of match-making works suffer as they once did from the serious disease of the lower jaw to which the term "necrosis" has been applied. This disease consisted in the decay of the bone, and in former years was undoubtedly a source of much mortality among match-makers. We are glad to be able to state that the ailment in question has been practically abolished through the improvements which Messrs. Bryant & May have introduced into their business, as indicated by Dr. Drinkwater in his recent articles in our pages. The enterprise, which has been characteristic of Messrs. Bryant & May's business, is in itself a testimony to the power which improvement in the chemistry of our common products possesses in limiting disease in the workers in the great industries of our land. To this topic we will specially refer in a future series of articles by the editor on the relations which exist between work and disease.

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This pamphlet, now being issued in its FIFTH EDITION, forms a complete refutation of quackery of all kinds, and is a safe and reliable guide, from the medical standpoint, to all young men. EVERY YOUTH should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense. Full directions for the treatment of "Nervous Debility" so-called, and allied ailments, are also given. Thousands of sufferers have welcomed this pamphlet as a veritable beacon-light to health and purity of life.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

QUINSY AND SORE THROAT.

OF course, what naturally interests a patient suffering from sore throat is what will cure. In the January number of the *Edinburgh Medical Journal* an abstract is given of a lecture by Sir Morell Mackenzie. Speaking of quinsy, this eminent author writes, "I have found guaiacum, which used to be in the form of the ammoniated tincture, very efficient. I recollect a Manchester surgeon, Dr. Crompton, who used to come a good deal to the Throat Hospital about the time it was founded, telling me I should find much more benefit by giving it in the form of a powder; and I did so, letting the patient take a pinch of the resin. This was rather disagreeable, and after a time I had it made into lozenges, containing about three grains in each. In this form it makes an excellent remedy. Nine cases out of ten will get rapidly well if one of these lozenges is given every two hours at the outset.

"I sometimes also apply locally a little bismuth and opium, or an eighth of a grain of morphine with a quarter of a grain of starch, because the problem is not only to cure the patient, but to keep him comfortable till he is cured. Sometimes the guaiac causes a little diarrhœa, which is not altogether disadvantageous; but the morphine is usually sufficient to check it. What I have said about guaiac applies to acute inflammations of any part of the back of the throat. Dr. Home has said of guaiacum, 'Instar specifici in hoc morbo operatur.' It is really specific. I have used it for fully twenty years, and I assure you it is one of the best remedies you could have. It causes a slight stinging sensation, and this is an additional reason for using the morphine."

A few weeks ago we gave in the columns of HEALTH a prescription which an excellent physician assured us won him much fame and success. We repeat the prescription, as it is one of very great value indeed.

THROAT POWDER.—Pulv. cubebæ (recent), pulv. guaiaci res., pulv. potass chlorat., pulv. sacch. albi, of each half an ounce. Mix well.

Directions.—As much as will lie on a sixpenny piece to be dissolved slowly upon the tongue every hour or two, increasing interval according to progress.

In irritation of the throat and acute inflammation, where the voice is husky and weak, there is nothing that can surpass the Voice Tabloids. They are much pleasanter than the foregoing to use, and contain a very small quantity of cocaine with chlorate of potash and borax. One or more of these seldom, if ever, fails to relieve the pain and weakness. They enjoy a wide reputation among throat specialists, the clergy, and public speakers and singers generally.

Where there is no pain, but an unhealthy state of the oral and pharyngeal mucous membrane, the Chlorate of Potash and Borax Tabloids will answer every requirement. They are antiseptic, tone the mucous membrane, loosen phlegm, and bathe the mucous surfaces with the soothing medication. In aphonia (loss of voice) and weakness of the voice from over use, the Chloride of Ammonium Tabloids (five grains) should be taken.

AT the horticultural show: "This is a tobacco-plant, my dear." "Indeed! how very interesting! But I don't see any cigars on it."

MORE ABOUT BALDNESS.

The cause of baldness, although long and diligently searched for, yet remains undiscovered. The theories to account for the loss of hair have been many and various. Mr. Eaton attributed it to the wearing of tightly fitting hair coverings, living within doors, and keeping the hair closely cropped. He thinks, also, that this condition is exaggerated by the influence of heredity, and says that there is no reason why bald heads should not yield to the laws of heredity as much as curly or red heads. Mr. Gouinlock, in the same magazine, attributes baldness to the high hat and the hard felt hat, both of which constrict the blood-vessels which nourish the hair-bulbs.

Dr. T. Wesley Mills, professor of physiology at McGill University, thinks that both of these views indicate the direction in which the truth lies, but that neither gets at it wholly. The degree to which such peculiarities as baldness are inherited is one of the most disputed matters. Exposure of the body to sun and air has much to do with hair-production, as Mr. Eaton claims, and as to the truth of which any one may satisfy himself by leaving the arms or other portions of the body uncovered at the seaside or in the country.

Taking up the case against the stiff hat, Mr. Gouinlock explains how readily the arteries can be compressed, especially when the hair is cropped close. He thinks the fact that below the line of pressure the hair remains, while it disappears above it, is quite clear upon his theory; and, to account for the presence of hair over the temporal region when absent on the crown, he insists that here the temporal muscle acts as a cushion, preventing pressure. But this writer seems to forget that there are superficial and middle temporal arterial branches as well as deep ones, and that it is just these superficial ones (liable to pressure) that have most to do with supplying blood to the hair-bulbs. He also takes no account of other methods, beside pressure, by which blood can be cut off from a certain region. The familiar phenomena of blushing and pallor show that the nervous system has a controlling influence over the size of small arteries; and the fact that the hair may become grey in a few hours, under violent emotion, carries with it the lesson that in some way the nutrition of the hair is regulated by this same nervous system.

Dr. Mills says, that, to understand the physiological bearings of this subject, the somewhat complex relations of the blood-vessels of the brain, the face, the bones and muscles of the head, and of the scalp, must be borne in mind. The arteries of the brain find an outlet for their blood, when it has passed through the capillaries and has done its work, in those peculiar venous channels lying on the inner tables of the skull known as "sinuses." These communicate with the veins of the softer osseous tissue (diploë) lying between the main tables of the cranial bones, which again have connections with the veins on the outside of the head. Now, it is plain, from this series of connections, that pressure on the scalp must influence the whole vascular system of the head back to the arteries of the brain, unless in some way counteracted. Pressure generally affects veins, from their superficial position, much more than arteries. The bad effects of venous dilation are seen in the slow-healing ulcers on the limbs of those with dilated (varicose) veins. Throughout his paper Mr. Gouinlock has directed his attention almost wholly to arteries rather than to veins. He has nowhere mentioned, what is commonly enough seen by the physician, that anastomotic arterial connections are especially opened up under the exigencies of disease, as from the pressure of tumours, &c.

Would Nature refuse to combat the hard hat? Could she not adapt to it in a greater degree than Mr. Gouinlock's theory supposes? In looking at a plate portraying the course of the arteries of the head, it will be noticed that the terminal branches mount to the vertex of the skull, and twine and unite with their fellows of the opposite side by *very small* offshoots. As it is the smaller branches of arteries that are the most susceptible to changes in calibre,—can, in fact, be most readily influenced by the nervous mechanism,—it is easy to understand why that part of the scalp, with its hair-bulbs, supplied by them, should, either from pressure or from lessening of calibre in response to nervous influence, be the area most to suffer: hence the explanation of the fact that baldness of the vertex is the most marked.

The great increase in the prevalence of all forms of nervous disease, and the modifications wrought in old forms of disease by the greater prominence of the nervous type of human being, point to the fact that our civilization makes calls upon the organization which tell especially on the nervous system. The strain of life falls in general, it will be conceded, most upon men. Man is the bread-winner: his anxieties, struggles, and disappointments are both many and severe; and man is often prematurely bald for the same reason that he is prematurely old in other respects. Woman is less so, because brain stress less frequently falls to her lot. But in connection with this must be taken, to complete the explanation, the fact, that, as with some races and some males of our own race, the vitality and persistence of the hair of the head in woman is specially marked. That overwork of the brain may influence the brain-circulation (and so the hair) unfavourably, is evident enough from the dark circles beneath the eyes, owing to venous congestion, on the morning after unduly severe mental exercise, not to mention the headache from a similar cause; and it is not surprising that the top of the head, with its relatively variable and feeble blood-supply, should suffer most,—in a word, that the overworked or overworried man should be bald,—unless, as in most women, there is unusual vitality of his hair-bulbs. Baldness is one more of the many warnings of our day,—one of Nature's protests against the irregular and excessive activity maintained in this restless age.

An African clergyman, in preaching from the text, "And multitudes came unto Him, and He healed them of divers diseases," said: "This is a terrible text my dying congregation. Disease is in the world. The small-pox slays its hundreds, the cholera its thousands, and yellow fever its tens of thousands, but in the language of our text, if you take the divers, you are gone. These earthly doctors can cure small-pox, cholera, and yellow fever, if they get there in time, but nobody but the good Lord can cure the divers."

People Fret Too Much About Trifles.—Women find a sea of trouble in their housekeeping. Some one says they often put as much worry and anxiety into a loaf of bread, a pie, a cake, into the weekly washing and ironing as should suffice for much weightier matters. Suppose these things go wrong to-day, the to-morrows are coming in which to try again, and the thing is not worth clouding your own spirit and those around you, injuring yourself and them physically,—for the mind affects the body,—and for such a trifle. When a thing is beyond repair, waste no useless regrets over it, and do no idle fretting. Strive for that serenity of spirit that will enable you to make the best of all things. That means contentment in its best sense.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

BOURNEMOUTH FOR CHILDREN.

Dr. Horace Dobell writes as follows in the *Provincial Medical Journal*:—Some thirty years ago there was a Dr. Mainwaring practising at Bournemouth, who made many judicious observations on its medical aspects; and I find among these the following note about children, as the result of ten years' experience; "As a resort for delicate and rachitic children it is unrivalled. The sands afford ample scope for amusement and exercise; the children dig and shape it into various forms and devices, which prove a never-failing source of attraction to them; at the same time they are situated in a dry, warm playground, being sheltered by the wood-crowned cliffs. I have often been surprised and delighted by the rapid improvement that has taken place in pale and sickly children from India, and in children suffering from rickets in an aggravated form. . . . The little sufferers have been changed from a state of listlessness to one of activity and comparative strength, and from the misery of fastidious appetites to craving heartiness."

Any one who studies the specialities of the place will easily see how peculiarly it is suited for children, in addition to its fairly, but not too mild, marine atmosphere, and extraordinarily porous, dry, sandy soil, from which it is impossible for moisture to appear again, so rapidly does it percolate beyond the reach of surface influences. The beach is absolutely free from danger, for the sea never recedes far enough to expose rocks or islands of sand from which children may find it difficult to return when the tide flows in, and there is always a broad expanse of dry sand between the "edge of the waves" and the cliffs, from which egress is safe at all states of the tide. The shore is completely protected from the north, and to a large extent from the east, by the crescentic wall of cliffs, rising about 120 feet. When the air is not fresh enough on the beach, there are fine breezy walks on the tops of the cliffs; and when these are too windy or too cold there are the pine woods, traversed by excellent gravel walks and roads, and easily accessible by the different chines or ravines running from the woods to the sea; or, when it is advisable to get away from the sea-side altogether, there are the lovely "Talbot Woods," which still contain over one million pine trees. They are always sheltered, although permeated by sunlight, and afford innumerable safe walks, free from underwood, and always kept dry by their bed of pine needles.

But one of the greatest advantages for children is, in my opinion, the abundance of open heathland in all directions round Bournemouth, the air of which is most invigorating. The roads which cross these heaths to the neighbouring pretty villages and farms are admirable for horse, pony, and donkey exercise, and they are made good use of now by the riding masters, with their troops of boys and girls and older pupils, who are to be met in all directions. Another feature very characteristic of Bournemouth, and fully appreciated by parents who bring children to the place, is the gardens which surround the houses. Instead of the children having to go straight out of the house into the road or street, as in most sea-side places, nearly all the best lodging-houses, hotels, and boarding-houses, are surrounded by gardens and grounds, into which the children can run with safety. Another important point is the abundant supply of unquestionable milk, eggs, and butter from the large Hampshire and Dorset farms, the dairies of which are under close medical inspection, and I see from the agricultural reports that the "Hampshire Down mutton" is now considered superior to the famous "South Down," both in size and quality.

Within the last year a large, well-arranged, tepid sea-water swimming-bath has been added to the institutions of the town, where swimming is well-taught by experienced teachers of both sexes, and aquatic entertainments are given for the amusement of children.

Dr. Dobell concludes: "It is an unspeakable advantage to have such a health resort for young people in our island, for there can scarcely be a more painful form of refined cruelty than to order children abroad. It is rarely practicable to carry out the order; and thus parents are made to feel that a step, which has been represented to be of the utmost importance to their children's lives cannot be taken. And if the step is taken, it must generally be at the sacrifice of the domestic comfort of a whole family, and very often at the cost of neglecting some member of it requiring as much solicitude as the so-called "invalid." I consider, therefore, that I am discharging a public duty in thus emphatically calling attention to Bournemouth as a health resort for the young. Fortunately, I am in a position to do so without exciting the suspicion, which might attach to a younger man, of being influenced by personal interest. I ought to add that under the head of *Bournemouth*, I include Boscombe and Southbourne on the east, and Westbourne, Branksome, Canford Cliffs, and the upper parts of Parkstone on the west, representing a coast line of over six miles."

THE MORPHIA HABIT AND ITS TREATMENT.

Dr. Richardson in an article in the *Asclepiad* says, regarding the hygienic treatment of the morphia drinking habit, that it is important in treating morphine *habitués*, of both classes, to introduce diversion of mind and exercise of body as curative measures. These are admirable means towards the desired end, and accomplish far more than any harsh and determinate effort to enforce unqualified abstinence. For mental exercise it is good to advise music, singing, the committal of readings to memory, reciting, learning puzzles, and practising intellectual games like chess. For outdoor exercise and pleasure, games and pastimes which call forth a great deal of muscular exertion and some competition, without causing the fever of fatigue, are splendid remedies. The poison of idleness is the ally of the narcotic poison, and the two work together so like one that it is hard to distinguish between them. The one calls also for the other, whilst exercise disperses both.

Friends who come to the physician with morphine *habitués* are too often disposed to make over much of the habit and its consequences. By this process they annoy the patient, and by constantly dinning the matter into him, or her, make the slavery of the habit more pronounced. It is a good rule to warn friends on this point, and to instruct them as to the proper management of the *habitué* in the home circle. It should be recommended to treat the craze for the drug as lightly as possible; to do everything to divert the mind from it; to avoid dwelling on the topic or even touching upon it; and to encourage the cultivation of every mental and physical exercise that shall call the

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mind and body into new pursuits. Above all things, perfect candour towards these *habitués* should ever be the order of the day, for they resent deceit as easily as they follow it.

As regards medicinal treatment. It is always a good point of practice to prescribe useful corrective remedies for the morphine habit. In the desire to suppress the habit out and out, as *the* one effort of practice, I was accustomed, at one time to neglect this branch of healing, in which I am sure I was wrong. The patients under notice are favourable to treatment by medicine, and will willingly let the habit stand aside to a great extent for a prescription that has a definite purpose. They are also benefited by some medicines to a considerable extent. I think I may say that they are invariably benefited by the judicious administration of purgative medicines of the saline type. A dose of sulphate of magnesia, two to four drachms, with a grain of sulphate of iron, and half a fluid drachm of syrup of ginger in three ounces of water, is an excellent purgative. It removes the mental depression and languor, which minister to the habit so strongly, in a very efficient manner.

When the tongue is loaded, the conjunctiva a little yellow, and the appetite indifferent, I usually prescibe the following mixture, with good effect: Acid. nitrici. dilut., two drachms; tinct. nucis vom., a drachm and a half; liq. taraxaci, an ounce and a half; infus. aurantii comp., to six ounces. Dose; one-twelfth part two or three times a day, in a wineglassful of water.

This mixture seems to be specially suitable for the sufferers from the morphine habit. It reduces the craving, and it favours the digestion of food.

The question is usually asked: Is there an antidote for the morphine, any drug which destroys the craving for it? The answer, I am sorry to say, is negative so far. I have thought that in a recent case I have seen some good from the administration of belladonna, but I must wait for more light before I venture on any statement of a definite kind.

One word more as to the endeavour to stop the habit by immediate control and systematic withdrawal of the narcotic from the *habitué*. Presuming that the habit has been quite recently acquired I do not dispute that the attempt may be made with a chance of success. If made, however, it must be systematically and thoroughly done, under the most rigid medical supervision. There must be no playing with the trial. The strictest watch must be sustained, and the symptoms, always urgent, which follow upon the withdrawal must be met as they arise, with firmness, kindness, and judgment. Moreover, when the symptoms have passed away, medical supervision, unbroken, must be kept up for three months at the shortest. All this demands residence in a house where every convenience for the treatment is at hand, and where a trusted and resolute physician is always at his post. The attachment of such a home to one of our existing great medical institutions in the larger centres of life of this kingdom is a project that deserves serious and immediate consideration.

EVERY morning, when the German housewife receives her quart of milk, she immediately places it over the fire and brings it to a brisk boil. Boiled milk is not relished by many who are not accustomed to it; but most people come to like it decidedly after they have used it a short time. In view of the fact that milk may be the medium for the transmission of several diseases, we should do well to adopt the foreign custom of sterilizing it.

Public Health

"Health is the first Wealth."—*Emerson.*

SCARLET FEVER.

(Concluded.)

PROBABLY much may be done to prevent well persons from contracting scarlet fever when they are exposed to it. Statistics seem to prove that the rise and fall of this disease are controlled by the temperature and humidity of the atmosphere; scarlet fever rising after the temperature falls, and falling after it rises. The reasons why are stated in Dr. Baker's paper on "Some of the Cold Weather Communicable Diseases" (with diagrams) in the Transactions of the Michigan State Medical Society, 1887.

A very great number of reports have been received by the Michigan State Board of Health from reliable physicians, stating facts which show that scarlet fever is conveyed by "direct communication," "exposure while visiting," &c.

The following statements are taken from the reports of the health-officers to the Michigan State Board of Health, showing that scarlet fever may be conveyed by clothing, &c., and after a long period of time has elapsed since the first case occurred (with the name of health-officer and locality subjoined):—

"A man living in Detroit who has a child living in this neighbourhood came to see her, and in a short time the little girl was sick of scarlet fever. It was ascertained that he had been living with a family who were afflicted with the same."—Dr. S. Holcomb, health-officer, Southfield Township, Oakland County.

"By the presentation of the dress of a little girl, who died at Jackson, to a little girl living here."—Dr. Samuel DuBoise, Unadilla Township, Livingstone County.

"A woman brought the disease from Canada in her clothing, and gave it to the children where she stayed. Case No. 1 took it then, and case No. 2 took it from the children at school."—E. F. Wood, health-officer, Isabella Township, Isabella County.

"The only source of contagion that I have been able to discover was through letters received from a family residing in Mount Pleasant, which was then affected with it."—Dr. J. P. Cooper, health-officer, Ithaca Township, Gratiot County.

"I have but one case of contagious disease to report this week, that of Miss N. F., age seven years. The source of contagion is peculiar. Miss G. H., of Grass Lake, Jackson County, Mich., sick with scarlet fever, wrote a letter to the mother of this patient, and she (the little girl) had the envelope in her mouth. Seven days later she came down with the disease. It seems certain that she contracted the disease in that manner, as there is no other way that I can account for the appearance of the disease in that part of the township."—Dr. H. C. Maynard, health-officer, Hartford Village, Van Buren County.

"Last June one of Mr. More's children had scarlet fever. Strange to relate, but one of them had it. The 10th of this month (November) the carpets were taken up, and Fannie and Lulu, a cousin living near by, romped and played on them while in the yard. In a little over a week both of them were taken sick with scarlet fever. No precautions were taken after the case had occurred last June, and hence the outbreak nearly four months afterwards."—Dr. M. E. Bishop, health-officer, South Haven Village, Van Buren County.

The "Report of the Michigan State Board of Health

for 1884" contains, on p. 276, the following accounts of methods of spread of scarlet fever:—

Dr. A. L. Ambrose, health-officer of Hanover Township, Jackson County, reported three cases of scarlet-fever where the source of contagion was a wash-tub, which had been used several weeks previously by a family having the scarlet-fever. In four cases the contagion was left in houses that had not been properly disinfected. In one case the germs of the disease remained in the bedding that had been used by a scarlet-fever patient six or seven months previously. In one case the disease was taken from "old rags of eighteen to twenty months' standing."

Nov. 19th, Dr. N. W. Andrews, health-officer of North Muskegon, writes: "There was, some six or eight months ago, a mild case of scarlet-fever in the adjoining house. At the time, the people who now have the case had some household furniture stored there, which has lately been moved into their own house. I can find no other cause for the outbreak than that the contagion was communicated by means of the tapestry, which had been stored in a room where the child when sick had been allowed to go."

The following interesting statements are extracts from a letter received Aug. 23rd, 1884, from Rev. Fayette Hurd, of Grand Blanc, Mich., giving facts concerning scarlet-fever near the village of Laingsburg, Shiawassee County, during the month of December, 1880:—

"About Dec. 20th, 1880, the family were in the garret of the house, gathering up rubbish that had been collecting there for some time. They put into a basket to be burned a number of magazines, pictures, pieces of cloth, window-curtains, carpet-rags, and an old rubber doll, which belonged to a family that had the scarlet-fever in the same house during the winter of 1874-75. The boys gathered up a good many of the pictures, and the girl took the doll, which belonged to the child who had the disease in 1874, and was, I think, used by her when sick with scarlet-fever. The curtains were hung in the windows of the room during the sickness in 1874-75. The things saved out were used by the children for two or three days. The rest of the rubbish was burned. About the last of December the three children were taken sick with scarlet-fever."

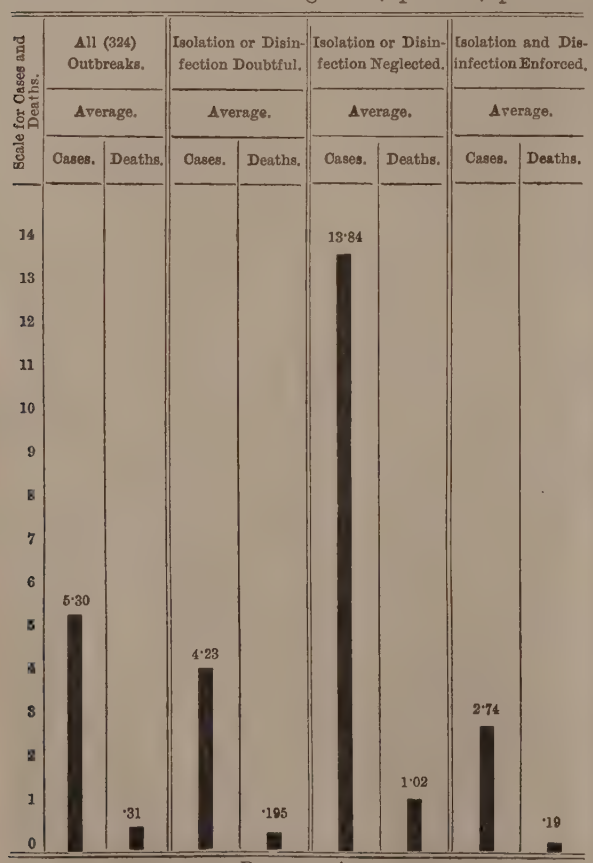

Diagram A.

The diagram (A) exhibits in a condensed form the experiences of the health-officers in Michigan relating to scarlet-fever during the year 1886. It shows that, in the 324 outbreaks, the average number of cases was 5·30, and the deaths were ·31; that in the 45 outbreaks in which isolation or disinfection, or both, were neglected, the average number of cases was 13·84, and the deaths 1·02; that in the 58 outbreaks in which isolation and disinfection were both enforced the average number of cases was only 2·74, and the average number of deaths ·19, the difference being an average of 11·10, and ·83 deaths, indicating a saving in these 58 outbreaks of 644 cases and 48 deaths. This saving is shown not simply by comparison with those outbreaks in which nothing was done, but also with outbreaks in which either isolation or disinfection was enforced.

A table (compiled in the office of the secretary of the State Board of Health, from reports made by local health-officers) giving the basis for the diagram and foregoing statement is as follows:—

Scarlet-Fever in Michigan in 1886.

	(1) All Outbreaks. (324 Outbreaks.)		(2) Isolation or Disinfection not mentioned, or Statements Doubtful. (220 Outbreaks.)		(3) Isolation or Disinfection, or Both, Neglected. (45 Outbreaks.)		(4) Isolation and Disinfection Both Enforced. (59 Outbreaks.)	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Totals ...	1,716	100	914	41	623	46	179	13
Averages.	5·30	0·31	4·15	0·19	13·84	1·02	3·03	0·22

THE ENGLISH DEATH-RATE IN 1888.

In commenting, a week or two since, upon the recorded death-rate during last year in the twenty-eight large English towns dealt with in the Registrar-General's Weekly Return, we stated that these rates justified the belief that the death-rate in the whole of England and Wales in 1888 was considerably lower than that in 1887, which was 18·8 per 1,000, and the lowest on record since the commencement of civil registration in 1837.

The Registrar-General's Quarterly Return for the last quarter of 1888, which is issued just as we are going to press, shows that the English death-rate for last year did not exceed 17·8 per 1,000 of the estimated population, and was thus 1·0 below the lowest rate previously recorded. The Registrar-General points out that the recorded death-rate in each of the eight years 1881-88 was lower than the rate in any year on record prior to 1881; and the mean annual rate in these eight years is no less than 2·3 below the mean rate in the preceding

ten years, 1871-80. It is further pointed out that this remarkable decline in the English death-rate implies that more than half a million persons "were alive in England and Wales at the end of 1888, whose deaths would have been recorded during the eight years, 1881-88, had the rate of mortality in those years equalled that which prevailed during the ten years 1871-80."

Until the publication of the Registrar-General's fifty-first annual report containing the detailed statistics for 1888, which will, probably, not be issued until the close of the present year, it will not be possible to analyse the causes which contributed to the marked decline in last year's death-rate. The information supplied by the four quarterly returns abundantly prove, however, that a considerable proportion of it was due to the unseasonably cold and wet summer, which reduced the usual mortality from infantile mortality from diarrhœa to exceptionally small proportions; and it is further evident that the recorded mortality from the other principal zymotic diseases was considerably below the average.

Owing to the marked decline in the death-rate, the natural increase of population by excess of births over deaths in 1888 showed an increase upon that recorded in 1887, although the registered births showed a further considerable decline, and were actually fewer than in any year since 1875, when the registration of births first became compulsory. The excess of births over deaths was less by nearly 6,000 than the estimated increase of population during the year, thus implying that the excess of emigration during the year was more than counter-balanced by increased immigration from other parts of the United Kingdom, or from other European countries. It is not possible, until the next census, to determine the probable accuracy of this assumption.

It appears, however, to be the deliberate opinion of the Registrar-General that the over-estimate of the present population of England and Wales, if there is an over-estimate, is of inconsiderable proportion, and does not materially affect the value of the calculated rates of marriages, of births, and of deaths that are put forward from time to time in his quarterly and annual reports.—*Lancet.*

A FOND mother of a smart boy was making a lot of nice preserves one day, and as she sealed them up she labelled them thus: "Gooseberry jam, put up by Mrs. Mason." Johnnie soon discovered the shelf on which they were deposited, and fell to work. Having emptied one of the jars, he took his school pencil and wrote underneath the label: "Put down by Johnnie Mason."

Highest Award, Only Gold Medal, London, 1884.

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Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

HOW AN EYE WAS LOST.

UNDER the title of the "Gateways of Knowledge," the late George Wilson, as many readers are aware, designated the organs of sense. The term was apt and expressive; moreover, it had the merit of being scientifically correct. The organs of sense are in themselves mere "gateways" through which impressions travel into the seat of knowledge within. Sir John Lubbock, in a recent volume, describes the sense-organs,—eyes, ears, nose, tongue, and skin,—as "the windows through which we look out into the world;" but Wilson's simile is the apter of the two, since we can scarcely be said to "look out" of even our eyes in the physiological meaning of the phrase. Through the sense-organs come the impressions which, when they appeal to our consciousness, and when they are translated by the brain into "knowledge," inform us of all that is passing in the world by which we are surrounded. These impressions enable us to react in turn upon that outer world, or at least to adjust ourselves to its conditions.

The ear, or "receiving-office" of the sound-waves which represent, for example, an approaching cab, transmits the impressions to the brain-centre (or head-office) for hearing; while this latter centre in turn, arousing our conscious perception of danger, contrives thus to stimulate the muscles which quicken our pace across the street, and carry us safely out of the way of the vehicle. This give-and-take principle, which physiologists call "reflex action," governs all our proceedings. In its operation the sense-organ, or "gateway of knowledge," is seen to be that part of the nervous system which, so to speak, assists, parcels out, distinguishes, and modifies the sounds, sights, odours, tastes, and ordinary sensations of the outer world, in order that they may be transmitted to, and appreciated by, the head-offices of the brain.

The number of the senses has generally been estimated at the five about which we were instructed in our early days; but science has grave reasons for increasing the list of the gateways of knowledge. There is probably a sense of weight and a heat sense also; while a sense of direction and one of equilibrium are reckoned by some physiologists as part of the nervous organization of animals. It forms an interesting task to trace the gradual beginnings of sense-organs as seen in the lower forms of animal life, and to note the analogous sensitiveness of many, if not of all, plants. Equally, if not more, interesting to the man of science is the task of discovering the meaning of certain unusual or unwonted sense-structures in lower animals, and of relating these rarer organs to their analogues in higher life. If Pope's dictum, that "the proper study of mankind is man," is to be lauded as a most admirable and comprehensive precept, the naturalist may be well content to add that we can thoroughly understand and appreciate the structure and the mental traits of humanity only when we take lower life into consideration. So much of humanity really represents the highly celebrated and modified types of things we see in lower life, that man's own place in nature,—admittedly the highest,—can be truly estimated

only when a knowledge of lower existence is taken into account.

On this latter principle the tolerably recent discovery of what has been called the *pineal eye* of lizards and other forms comes before us with fresh and startling interest. To understand the history of this curious eye it is necessary to note the nature of the *pineal gland*, which appears as a definite structure in the brain of man, and of other vertebrates. This gland is a little cone-shaped body, averaging a hazel-nut in size, and deriving its name from its resemblance to the fruit of the pine in form. It lies on the base or floor of the brain, in front of the cerebellum or lesser brain. The history and nature of this gland have been shrouded in mystery until within the past two or three years. It appeared to have no use, duty, or function to discharge in the economy of the brain. Descartes certainly placed the "soul" in this gland, but, needless to add, his views on this matter are now regarded only as an example of the curious metaphysical speculations of the past. Anatomists assert that the pineal gland is larger in the child than in the adult, a peculiarity which it certainly shares with other apparently useless glands in our bodies. Wherever such a peculiarity is noticed, science refers the glands, functionless in the full-grown form, either to the early history of the individual, or, what is infinitely more important, to the early history of the individual's *race*.

Things which have no apparent object in the life of to-day may remain as links binding us to the life of the past. In this principle we obtain a key capable of unlocking many doors hitherto shut against science and philosophy. If the development of the individual animal or plant may be held to repeat, as in a moving panoramic view, the history and development of its race, we can understand how every apparently useless organ of to-day represents a once useful structure, and how a knowledge of its past use may be gleaned from the study either of the individual's own early history, or from that of lower and related forms of life. As to its structure, the pineal gland of the human brain exhibits the usual grey nervous matter, and also the fibres seen in other parts of the brain. It is hollow below, and communicates with a well-known space or cavity (the third ventricle) of the organ of mind. In lower forms of vertebrate life, such as fishes, frogs, and reptiles, the pineal gland or body, in place of being overgrown, as it were, by other parts of the brain, and thus hidden deeply as in man, is exposed on the brain's upper surface. Especially in reptiles we find this open and exposed position of the pineal gland.

Somewhere about 1829, Brandt, a well-known zoologist, examining a very familiar lizard (*Lacerta agilis*), noted the fact that directly in the centre of the upper surface of the head was a curious spot, differing remarkably from the other parts of that region. In this spot one scale was unlike all the others, in that it exhibited a modified and somewhat transparent appearance. Later on, in the familiar legless lizard, known as the Slow worm or Blind worm, a dark spot is seen. This spot, moreover, surrounds a small structure or organ, which in turn lies just over the pineal gland of the animal's brain. Not until 1884 was the suggestion thrown out that this mysterious organ might be an eye,—rudimentary and imperfect, no doubt, and of little or no use to the animal as things are, but representing the remnant of an organ of sight useful enough in the past and forgotten members of its race.

Once set on the track of such an investigation, science was not slow to follow up the clues thus provided. The lizard class was duly overhauled with the view of discovering whether or not in others of its members this missing eye might be found better developed than in those already examined. The search was rewarded with complete success. Almost every member of this class of reptiles was found to be provided with the pineal eye in one or other of its stages of development. The iguanas, chameleons, geckos, and other groups exhibited this remarkable structure; but in a certain curious and ancient type of lizard, whose relations with the past place it among the very aristocrats of the lizard family, the missing eye was observed to present its most perfect form. This ancient type is represented by the solitary lizard known as *Hatteria*, which is found only in New Zealand. Its structure shows it to be a compound form, so to speak, uniting, as it does, in its own structure the characters of reptiles with those of birds. The pineal eye here is of a very distinct character. The parts proper to an eye have been preserved, and in another lizard, one of the monitor group (*Varanus*), this central eye can be distinctly seen, because of its prominent position on the animal's head. There is a lens in the pineal eye of these lizards, while there is also a development of eye-colour, and the "reds" of the nervous network, seen in all perfect eyes, are also distinctly developed.

Yet in the well-formed pineal eye of these animals there are also to be seen traces of that universal tendency on the part of nature to convert into rudimentary structures organs and parts for which there is little or no use. This, in truth, is one of the severe conditions of the laws of life. No excuse is allowed for a useless organ to linger on the stage of time. The law of use and disuse implies that, given an organ discharging its duties efficiently, it will flourish and increase in complexity. On the other hand, purposelessness is viewed as a heinous offence against the axioms and morals of vitality.

Useless things tend to vanish from among the possessions of animals and plants, and the pineal eye, even in *Hatteria* and *Varanus*, is being obscured and relegated to the limbo of purposeless parts. In the former lizard, a thick mass of opaque tissue has grown between the eye and the light, and even its scale has become modified against seeing. In the latter, a mass of colour has been formed beneath the transparent head-scale, thus blinding the eye and initiating the degeneration of the parts below. Not the least interesting of the points connected with the disappearance of this pineal eye in these animals is the extreme length of the rods and cones of its retina or nervous network. These structures are far longer than is usual in certain parts, exceeding the length of the natural rods and cones of the pineal eye at least three times. Here we witness an attempt on the part of the eye to fight against the inevitable. The rods have stretched themselves out in an attempt to catch the lingering rays of the light which is slowly but surely being shut out from them. They have entered a protest against their doom of extinction, but all to no purpose. The decree has gone forth that the ordinary side eyes of the lizards are sufficient for the purposes of their life. Brain structure and its normal nerves of sight have been developed to bring the latter eyes to the front; hence, in the battle of conditions and of life's ways and means it has been decreed that the pineal eye shall go to the wall, and no attempt at further increase of its rods and cones can avail to avert its impending fate.

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The relations of the curious central eye of lizards and other lower vertebrates to the pineal gland of higher animals remain for consideration. It is a notable fact that in respect of the manner in which its nerve is related to its other parts, as well as in respect of the formation of its lens, the waning central eye resembles not the natural eye of vertebrate animals, but that of lower or invertebrate forms. The huge fossil reptiles, the remains of which are well-known to us, possessed in their skulls an opening which doubtless allowed light to pass to a well-ordered and efficient pineal eye. From fishes and from frogs the pineal eye has well-nigh disappeared; and in birds, as well as in mammals, including man, the pineal gland, as we have seen, remains buried in the skull, showing no trace of a connection with the exterior of the skull.

But although the pineal eye differs from the eyes of back-boned animals in structure, and resembles that of lower animals, it is only necessary to suppose that to the higher forms a lower type of central or median eye was once upon a time transmitted. The higher types have inherited many structures from the lower forms, so that the idea just broached cannot be regarded in the light of an unverified or startling theory. The pineal eye is, in fact, a legacy to the back-boned tribes from their boneless neighbours and predecessors. The vertebrates developed eyes of their own, independently of the pineal eye; hence the latter gradually declines and vanishes before the more perfect eyes which back-boned life came to possess. Again, the higher brain-development of birds and quadrupeds practically extinguished the central eye in them, leaving only the otherwise meaningless "pineal gland" of their brains to represent a once perfect organ of vision. Yet the legacy from lower to higher life is clearly enough traceable, and it is not uninteresting to note that in very young infants there exists for a time a space uncovered by bone in the top of the head, where the pineal eye still exists in lizards.

In the history of the human skull this space soon completely disappears, through the growth of the skull-bones. It is, nevertheless, important to note that such a defect of the skull does exist in early human life, as a result apparently of the tendency to repeat the history of its past, which every living thing, from monad to man, undoubtedly exhibits. It is this large permanent opening which we see in the skulls of fossil reptiles. What was permanent in them has become transitory in higher life, which thus "harks back" in its development to the phases of the lower existences which have contributed to its bodily and mental evolution. The history of the missing eye of lizards may thus be shown to be bound up with much that is strange and interesting even in the domain of human life. The story of the pineal eye only demonstrates anew the unity of nature, and proves to us that in no sense can any living thing, from the lowest to the highest grades, in respect of its structure or history, be said to stand alone.

"Put on some more clothes, Mandy!" shrieked an elderly aunt at the watering-place; "folks'll see you!" she added, horror-struck. "Aunt Julia," replied Amanda, as she went out among the waves with all the trustful innocence of a Texas statesman, "what are we here for?"

Dr. Love says: A point important to keep in mind is that the oil of turpentine, cheap and always within reach, is one of the most valuable remedies in the *materia medica*, as a local and general stimulant, as a germicide and preventer of fermentation, and last, but not least, internally administered as a checker of bleeding.

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

ROMAN BATHS.

The bath held a most important place in the Roman household. Even the private baths were built in a style of incredible magnificence. Seneca tells us (Epist. lxxxvi.) that the man whose baths were not adorned with the most costly materials, the marbles of Numidia and of Egypt, was held to be poor and sordid. Before taking the bath it was customary to anoint the body with perfumed oil; the time of remaining in the water was regulated by the caprice or luxury of the bather. Upon leaving the bath the body was thoroughly dried and again anointed with oil, slaves being in attendance with vases of alabaster, bronze, or terra-cotta, containing those perfumes most grateful to the bather's fancy. Immense sums were spent upon these perfumes, sufficient sometimes, we are told, for the ransom of a province. It was now that the nails of the hands and feet were usually trimmed. This was considered by the Romans to be an operation of some importance. Specially trained slaves always undertook this part of the toilet.

Horace notes as something extraordinary the fact that he had seen a Roman cutting his own finger-nails. Those who had not slaves to render them this service had recourse to the barber, part of whose office it was to trim the nails of his customers. Small pinchers and silver knives were used. Roman ladies paid extraordinary attention to their nails, and, indeed, to the hand generally. It must be remembered that the hands played a far more important part in the Roman world of fashion than they do at present. In speaking amongst themselves the Romans used the hand as an important auxiliary to the voice, and its action in dancing was indicated by strictly prescribed rules. The hands were at the same time more exposed to the action of the air than at present, gloves not having yet come into use. Many rings were worn, under the impression that an undue thickness of the fingers would be thereby prevented. Various soaps and cosmetics were used to give a whiteness of tint to the hand.

Sandals, of a fashion to leave the naked foot in view, were worn at this time by even the most elegant of the Roman women, and the feet claimed an attention equal to that bestowed upon the hands. In the time of Augustus these sandals were, in fact, little more than soles held in position by cords (*ansulæ*) which passed between the toes and over the foot; a little later on projections from the sole up the side of the foot became general, and these gradually developed into something very like the modern shoe. But the declension from the simplicity of republican manners was more particularly noticeable in the mode of dressing the hair adopted by the ladies of the post-Augustan age. The chaste simplicity of the Grecian knot (*nodus*) had given place to the most complicated artificial structures. False hair was largely used.

Martial avers that a Roman lady's hair of his acquaintance must be her own, because he knows the shop in which she bought it. Ovid and Juvenal refer to the practice with contempt. The custom of wearing false hair was not confined merely to those to whom nature had been niggardly in the matter of quantity, but it was largely indulged in by those who were dissatisfied with the colour of their own tresses. Auburn, or nearly

red, hair was then the rage. Massalina hid the raven blackness of her own locks under an auburn wig, "*nigrum flavo crinem abscondente galero.*" St. Gregory of Nazianzen inveighs with bitterness against those who pile upon their heads storey upon storey, and naïvely doubts whether such edifices can be raised without recourse to foreign spoils. These structures were held together by small chains of gold, or tied with richly coloured ribbons set with precious stones.

Sometimes the hair would be arranged in a coil at the back of the head, and drawn up from the roots so as to leave the neck exposed. Sometimes it would be done in military fashion to imitate the soldier's casque or buckler. Various artificial means were at hand by the use of which the much-coveted auburn tint might be acquired. Those ladies whose hair was naturally of too light a colour for the prevailing fashion used saffron to darken it. Gold dust was sprinkled upon the hair by others. The Emperor Commodus himself used this regularly, and it was said that when the rays of the sun fell upon his head it had the appearance of being on fire.

CHRISTIAN SCIENTIST: "Have you ever tried faith-cure for your rheumatism?" Patient: "Yes, I'm trying it now. I've got in my pocket the left hind foot of a graveyard rabbit that was killed in the dark of the moon, and I do believe that it's helping me."

BOILS.—Dr. T. L. Craig (*Med. and Surg. Rep.*) recommends the following treatment for boils:—Tinct. ferri perchlor., twenty-five drops; liquor arsenicalis, three drops; aquæ, half an ounce. Take a dose after each meal. Use carbolized camphor locally, and a poultice when there is much inflammation. Also give small doses of Epsom salts to prevent constipation.

THE SANITARY INSTITUTE, Parkes Museum, 74a, Margaret-street, W.—Lectures and demonstrations for Sanitary Officers, specially adapted for candidates preparing for the Institute's Examination for Inspectors of Nuisances, Tuesdays and Fridays, at 8 p.m., 1889.—March 5th, (1) Introductory Lecture—General History, Principles, and Methods of Hygiene. Dr. Benjamin Ward Richardson, LL.D., F.R.S.—March 12th, (2) Water Supply, Drinking Water, Pollution of Water. Dr. Louis Parkes, Diploma Public Health, Lond.—March 15th, (3) Ventilation, Measurement of Cubic Space, &c. Sir Douglas Galton, K.C.B., D.C.L., LL.D., F.R.S.—March 19th, (4) Drainage and Construction. Prof. H. Robinson, M.Inst.C.E.—March 22nd, (5) Scavenging, Disposal of Refuse and Sewage. Mr. H. Percy Boulnois, M.Inst.C.E.—March 26th, (6) Sanitary Appliances. Prof. W. H. Corfield, M.A., M.D. (Oxon).—March 29th, (7) Food (including Milk), Sale of Food and Drugs Act. Mr. Charles E. Cassell, F.C.S., F.I.C.—April 2nd, (8) Infectious Diseases and Methods of Disinfection. Mr. Shirley F. Murphy, M.R.C.S.—April 5th, (9) General Powers and Duties of Inspectors of Nuisances, Method of Inspection. Mr. J. F. J. Sykes, B.Sc., Diploma Public Health, M.B.—April 9th, (10) Nature of Nuisances, including Nuisances the Abatement of which is Difficult. Mr. J. F. J. Sykes, B.Sc., Diploma Public Health, M.B.—April 12th, (11) Sanitary Law—General Enactments, Public Health Act, 1875, Model Bye-Laws. Mr. A. Wynter Blyth, M.R.C.S.—April 16th, (12) Sanitary Laws and Regulations Governing the Metropolis. Mr. A. Wynter Blyth, M.R.C.S.—A fee of ten shillings and sixpence for the course will be charged to cover expenses, and students attending the course will be granted free admission to the Museum and Library during March and April.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Open Spaces in Cities.—Every one agrees that there should be fresh-air spaces in a city, and in spite of the fact that the price of land in all growing cities has been steadily increasing, the tendency of late years has been to increase the number and area of such spaces rather than to diminish them. To obtain their best effects such open spaces must not be too much aggregated, nor too far from the residences of the poorer classes, who most need their air and light. One large park on the outskirts is by no means a substitute for a number of open squares scattered through the city. This fact is very clearly brought out in an interesting paper by E. R. L. Gould in the publications of the American Statistical Association, entitled "Park Areas and Open Spaces in American and European Cities," and some of the figures given deserve careful consideration. The difference in the proportion of open areas to population, and in the manner in which these open areas are aggregated or distributed, is very great. For example, the number of persons per acre of open space is,—for London, 694; Paris, 495; Berlin, 804; Edinburgh, 246; Vienna, 473; Manchester, 2,230; New York, 994; Boston, 301; Baltimore, 376; Philadelphia, 340; Cincinnati, 678; St. Louis, 164; Washington, 361; Newark, 8,532; Jersey City, 18,573; Kansas City, 27,892; Pittsburg, 120,299. These figures do not, however, give an accurate notion of the proportion of open space which the inhabitants of these different cities really enjoy, in part, because of the great differences in the width of streets, and in part because of the differences in the way in which this open space is distributed. If we omit the single largest park in each city we find that the number of persons per acre of open space is,—for London, 909; Paris, 985; Berlin, 1,314; Edinburgh, 672; Vienna, 3,305; New York, 3,334; Boston, 529; Baltimore, 1,749; Philadelphia, 17,649; Cincinnati, 1,528; St. Louis, 460; Washington, 451. As regards absolute proportion of open space to population, Washington is far ahead of any large city in the world, and it has also the greatest relative number of small open spaces. Mr. Gould thinks that the lot of our city masses is much more joyless than it need be, and that easy access to open parks is one of the things that should be provided. Certainly there is every reason why such provision should be made in time in our Western cities. There is no city which has too much breathing room, and the reservation of open spaces for this purpose is the best investment which a municipality can make.—*Sanitary Engineer.*

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Training the Emotions.—It has been proposed to give some attention to regulating the development of the emotions both in the young and in the adult public. Frances Power Cobbe, in the *Fortnightly Review*, maintains that emotions come to persons by a sort of contagion far oftener than they spring up of themselves in the human breast. Any attempt to communicate our emotions by command, however, tends rather to produce the opposite feelings. In order to educate the emotions of others, we must employ this natural agency, contagion. In order to inspire a person with a given feeling, we must exhibit the feeling in ourselves. Parents, duly impressed with the importance of the subject, would care-

fully suppress, or at least conceal, such of their own emotions as they would regret to see caught up by their children. A teacher who has the respect and esteem of his pupils will affect their emotions for evil or good according as he betrays enthusiasm or aversion for selfish and sanguinary conquerors, according as he justifies or condemns assassins and anarchists, according as he represents science as seeking triumphs or truths, and according as he treats efforts for the elevation of mankind with levity or respect. The companions of the young have a great influence on the development of their emotions. As regards girls, their doubly emotional natures make it a matter of moral life and death that their companions should be pure and honourable-minded. Too little precaution is taken, especially in American public schools, against the herding of innocent children with others who have been familiar with vice. As regards the education of the emotions of the community, an excessively demoralizing influence was removed when the public was excluded from executions. Admirable machinery for the communication of noble emotions through the masses is furnished by majestic public functions and by funerals of distinguished men. Literature has an immense power to sway the emotions of all educated people. The stage is another great agency for training the emotions of the public, and even when it produces only harmless merriment, its influence is wholesome and beneficent. Music and the beauty of nature and of art are also powerful levers of the higher emotions, which it becomes us to use for the benefit of our fellows whenever it is practicable to do so.—*Popular Science Monthly.*

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Electric Light and Eyes.—In the *Medical News*, Dr. George M. Gould discusses the question, "Is the electric light injurious to the eyes?" Before proceeding to the direct answer of this question, he refers to the relation of the electric light to general hygiene. Most every one, he says, has a general impression that the electric light is much superior to other methods of artificial illumination, so far as concerns our general health and comfort, but few could give a reason for the faith that is in them. They will come out of a theatre, music-hall, church, &c., with headaches, lassitude, exhaustion, their bodies bathed in sweat, all resulting in colds and a multitude of major and minor affections, and never utter a word of protest or complaint against the culpable and parsimonious management that permits the vitiation, poisoning, and superheating of the atmosphere by a thousand gas-jets. In the discussion of the question as to the injury to the eyes by the use of the electric light, Dr. Gould refers at length to the literature of the subject, and sums up the whole matter in the following conclusions:—1. As regards general hygiene, the superiority of the electric light over gas as an artificial illuminant is so overwhelming as to admit of no discussion. It is incontestably the light of the future, and the public should not rest until its meeting-places, such as theatres, halls, reading-rooms, churches, &c., are lighted by the most perfect system at its command. 2. A study of the published cases of injury of the eyes by the electric light shows that not one was due to the use of the diffused light as an illuminant. The popular prejudice against such a use of it is absolutely without justification. All the cases reported were of scientific investigators, &c., or workmen about the light, who approached it very closely, gazed at it protractedly, and without protecting coloured spectacles. 3. The ocular injury is due, not to the supposed preponderance in the electric-light rays of violet and ultra-violet (chemical or actinic) waves, but simply to the greater number (intensity) of the usual length light-waves. 4. The symptoms of the ocular injury are possibly immediate temporary "retinal paralysis," blepharospasm, central scotomata, chromatopsia, after-images, &c. Within twenty-four hours there come on intense photophobia, lachrymation, ocular pain, a feeling as of foreign bodies beneath the lids, conjunctival hyperæmia and congestion, pericorneal circles, &c. 5. The attack usually lasts but two or three days; the prognosis is excellent; the treatment is simply cocaine and atropine instillations and cold or hot compresses. 6. Workmen and experimenters who must approach closely to the electric light should protect their eyes by smoked or tinted glasses, the depth of the tint being greater where the light is more brilliant, the proximity greater, or the exposure longer. In the welding-works the workmen must be particularly careful about this, and must also not expose the skin of the face, neck, and hands to the action of the light. The precaution may not be amiss to advise the curious against testing their eyes by gazing at the ordinary arc and glow lights at short range.

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How to Make Good Coffee. — Coffee is rarely prepared with the care and attention which is necessary to make it a popular stimulant. Even the berries require already a special treatment before they can yield the precious beverage. They ought to be washed with warm water and dried again several times before they are roasted. The roasting in itself is an operation requiring great caution. Berries which are roasted to a dark brown colour have no aroma at all, but a pungent; burnt taste. The more the berries are crushed, the better and stronger is the liquor prepared therefrom. Well made coffee extract, from which we can make a liquor more or less strong, as we like it, by merely pouring more or less hot water on it, is preferable to any other way of making coffee. There is a very simple way of getting at the nourishing gluten in the coffee, namely, by adding a small quantity of bicarbonate of soda. The gluten is easily dissolved in all alkaline waters, containing an excess of carbonic acid. For this reason the Dutch, and many coffee judges in Germany, boil their coffee in mineral water, and this is why we get such excellent coffee in certain cities or baths, because the wells there contain so much carbonate of soda. To prepare coffee in a chemically correct manner, put the ground coffee on the filter-sieve, add a pinch of bicarbonate of soda, and spread the coffee evenly, and press it down tightly. Cover with the larger sieve-plate, and pour a small quantity of boiling water over it, just to moisten the charge of coffee. Repeat the pouring of hot water in somewhat larger quantities, but always put the lid on the filter-sieve, and continue to do so until the pot contains an aromatic, oily, very dark extract. Then take off the funnel and dilute with hot water until the extract has the usual strength of a good coffee. This coffee has all the aromatic properties of the berry. It is nourishing, as it contains gluten, and a proper proportion of tannin, and is free from burnt and bitter substances.

Look out for a man who is advertising an infallible cure for a corn, price thirteen stamps, and money refunded if the corn does not disappear. If you send him the amount, you will receive by return mail the following recipe: "Cut off your toe."

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, 'Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and *not to the Editor*.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

PHOTO.—Try putting the joint under the cold water tap for a few minutes each morning, and rub into it a little Elliman's Embrocation night and morning. If this does not cure you, show it to a surgeon.

JAMES CLARK.—We have no doubt that the lemon may do you good, but its value has always been over-estimated. Probably your care in your food has as much to do with your health as your lemon-juice drinking.

NERVOUS EXHAUSTION.

PULVERMACHER'S World-Famed GALVANIC BELTS for the Cure of NERVOUS EXHAUSTION and DEBILITY, have received testimonials from three Physicians to Her Majesty the Queen, and the leading Physicians of nine London Hospitals, including over Forty Members of the Royal College of Physicians of London.

The distressing symptoms of NERVOUS EXHAUSTION and DEBILITY are speedily removed by means of **PULVERMACHER'S world-famed Galvanic Belts,** which are so arranged as to convey a continuous electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

Dr. H. A. ALLBUTT, M.R.C.P., 24, Park Square, Leeds, writes, Oct. 1888:—"I always recommend with confidence MR. PULVERMACHER'S BELTS. Ladies recovering from illness incidental to their sex will find these BELTS of vast assistance in restoring lost nerve power."

Dr. C. HANDFIELD JONES, F.R.C.P., F.R.S., Physician to St. Mary's Hospital, says: "I am satisfied that MR. PULVERMACHER is an honest and earnest labourer in the field of science, and I think he deserves to meet with every encouragement from the profession and scientific men."

SIR CHARLES LOCOCK, Bart., M.D., says:—"PULVERMACHER'S BELTS are very effective in neuralgia and rheumatic affections, and I have prescribed them largely in my practice for other similar maladies, paralysis, &c."

For full Price List and particulars, see New Pamphlet, **"GALVANISM: Nature's Chief Restorer of Impaired Vital Energy."** Post Free from

PULVERMACHER'S
GALVANIC ESTABLISHMENT,
194, Regent-street, LONDON, W.
(Established over Forty Years.)

TYRO.—Try injecting a teaspoonful of glycerine, as directed in HEALTH, No. 285, in the article on the use of glycerine in constipation. This may probably relieve your symptoms. If this treatment does not suffice, try applying a little pure Hazeline to the affected parts as a lotion.

NUX.—Reform your food-habits, and try the diet ordered to "Lorna Doone" in last week's HEALTH. Take also, regularly, twenty drops of Cascara Liquid Extract in water, between your meals, once daily, for the cure of the liver-trouble.

J. ANDERSON.—For your hair-weakness use the following lotion: Solution of ammonia, half an ounce; tincture of cantharides, half an ounce; eau de Cologne, one ounce; water to eight ounces. Rub into the roots morning and night with a soft sponge.

C. R.—You should have your eyes thoroughly tested. Go to Mr. Browning, 63, Strand, W.C., and have your sight tried by him, as, in our opinion, you require suitable glasses.

B. G. L.—Try Dahl's Cakes, and take a Cascara Tabloid or two (Messrs. Burroughs, Wellcome & Co.'s). Take Scott's Midlothian Oat Flour in place of tea and coffee, night and morning, and use Dahl's Cakes. You will find this diet cure you.

NEMO.—Try the following: Carbonate of bismuth, ten grains; wood charcoal, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals, when you are troubled with acidity.

G. A.—Try Vin Mariani (Roberts & Co., chemists, New Bond-street, London, W.) after meals, twice daily.

MAX.—Easton's Syrup will suit you as a tonic. Try it in a teaspoonful-dose, in a wineglass of water, twice daily, after meals. Use Seller's preparation, advertised in our pages.

G. LESLIE.—Apply a little zinc ointment to the parts night and morning, and internally take a teaspoonful of Easton's Syrup (Seller's) after your meals, in a wineglass of water, twice daily.

NEPENTHE.—Inhale, at bedtime, the vapour of a pint of hot water, to which a little Sanitas Oil has been added. After your meals, take a dessertspoonful of Scott's Cod Oil Emulsion with Hypophosphites, thrice daily, as a general strengthening measure. Cold sponging to the chest will also be found useful each morning.

ALBERTA.—Try the following mixture: Bicarbonate of soda, two drachms; dilute hydrocyanic acid, twelve minims; compound infusion of gentian, to eight ounces. Mix. Take a tablespoonful twice daily, an hour before meals.

FAIRY.—Try the effect of a cold sponge bath each morning, and take fifteen drops Fer Bravais after your meals, twice daily, in a little water. Rest after your meals for an hour at least.

PRINCE KARL.—Use the "Pommade Tricophile" of the French Hygienic Society, 6, Conduit-street, Regent-street, London, W. (advertised in our pages). Wash the hair once a week with Bayley's Soap.

F. E.—Try the effect of taking the following pill: Powdered ipecacuahna, half a grain; powdered capsicum, one grain; powdered rhubarb, two grains; extract of gentian, three grains. Six such pills to be made, and one to be taken half an hour before dinner when there is any liver irritation.

CAPE TOWN.—Try some Salicylic Cream applied to the corn, by way of softening the skin-tissues, and then pare the corn in the morning. Repeat this process as often as needed. Wear a woollen sole inside your boot, to avoid pressure on the corn; or wear thick stockings and roomy boots.

LONDSDALE.—1. See remedy for boils in advice given to "L. L." in HEALTH for last week. 2. Try "Puriline Tooth Polish" (advertised in our pages), and use the Tooth Wash also made by Mr. Wilson, 422, Clapham-road, London, S.W., sent, post free, for 1s. each.

ANTI-QUACK.—1. Of no use at all in your case. Be guided by your Manchester physician, since his treatment has done you good. 2. Seigel's Syrup is, in our opinion, a most useful family medicine, and acts well in liver-ailments, constipation, and the like. 3. We should say a teaspoonful of Easton's Syrup (Seller's), advertised in our pages, would be as excellent a tonic as you could take. It should be taken in a wineglass of water, thrice daily, after food.

REX.—1. All equally good,—the first may probably suit you best. 2. Use milk agreeably to your own taste. 3. No: hot water is useful between meals in cases of indigestion. 4. The bitter ale, certainly.

G. BLACK.—Drink Pitkeathly Water (Messrs. Reid & Donald, Perth, N.B.) with Lithia regularly, and avoid all alcohol for a time. Your diet must be largely vegetable while you are curing yourself.

E. G. F.—The principle of the Cellular Clothing Co.'s fabrics has been frequently and at length alluded to in our columns. It is founded on the fact that air is a bad conductor of heat. See advertisement in our pages. You should procure the pamphlet issued by this firm and peruse it carefully.

GINGER.—Messrs. Pulvermacher, 194, Regent-street, London, W., will supply you with the article to which you refer.

B. S.—1. Mellin's Food is that you should use. 2. The truss is called the Xylonite. Apply at 52, Oxford-street, London, W.

B. ALSTON.—Drink Pitkeathly Water regularly, avoiding all alcohol. Your ailment is not one which need give you any uneasiness at all. Care in diet will relieve it.

C. CHURCH.—1. Your questions will be best answered if you call on Mr. Harness, 52, New Oxford-street, London, W. 2. We cannot say whether or not any appliance will relieve you, but a personal examination of your case will decide this.

C. P. E.—The Cellular Clothing should be tried by you. See advt. in our pages. There is a danger, as you are now clothed, of chill and damp.

STIRLING.—For your "eruptions" use Vinolia (Messrs. Roberts & Co., 76, New Bond-street, London, W.) as an external application. This will probably cure this ailment. You should not take any tonic continuously. Give up that you are taking, and cease drugs altogether for a time. For the rest, take a tepid sponge bath each morning, and let your food be of simple kind. Out-door exercise should be freely taken also.

C. A. E.—You should take a dessertspoonful of Scott's Cod Oil Emulsion after your meals thrice daily, and at night inhale the vapour of a pint of hot water to which a little "Sanitas" Oil has been added. If you suffer from constipation, you should follow the advice given to "Lorna Doone" in the last number of HEALTH.

H. J.—We should recommend you to try massage of the abdomen in the case of the child, as that process is both simple and effective in curing the ailment to which you refer. The administration of oil with the food, or after meals, is also to be commended for children. Try Dahl's Cakes, as advertised in our pages; this firm makes a special cake for use by children. If not bettered, let us know.

CONNAISSONS.—The lecturer you heard, we have no hesitation in saying, must either have been a very ignorant person or a quack. Such persons often make statements which have no foundation, in fact; and we advise you to dismiss from your mind the utter rubbish he enunciated. Trust to the statements you have read in the pamphlet, which are founded on science and common sense alike. You need have no fears at all; simply live carefully, and you will be perfectly able to undertake all the duties to which you allude.

BUNTER'S NERVINE

Cures TOOTHACHE Instantly.

Prevents Decay, Saves Extraction. Sleepless Nights Prevented. Neuralgic Headaches and all Nerve Pains removed.

Dr. ANDREW WILSON, F.R.S.E., &c., writing in *Health*, says: "'BUNTER'S NERVINE' has stood the most severe test. For many years it has been the favourite household Remedy for TOOTHACHE and kindred ailments of NEURALGIC character. It contains nothing of a deleterious nature, and should claim an honoured place in every family medicine chest."

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IS THE MOST SIMPLE AND

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Any one can easily prepare and place it in the cavity of the Tooth in a soft state, and in a short time it becomes a perfectly hard and white Enamel, forming, as it were, a part of the original substance of the Tooth.

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Will Purify and Beautify the Teeth with a Pearly Whiteness; Polish the Enamel; Destroy Tartar and all Living Germs; and Keep the Mouth in a Delicious Condition of Comfort, Health, Purity, and Fragrance. It is not a Powder or Soft Paste that will scatter over clothing and soil the toilet, but a Dental Paste of stiff consistency, non-gritty, and Absolutely Pure. May be carried in the pocket in any climate of the world, without injury or losing its virtues.

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FOR THE TEETH, GUMS, AND BREATH.

A PURE, PERFECT, AND REFRESHING FLUID DENTIFRICE.

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A. B. (Wales).—You do not take enough of fatty foods in your dietary. Take plenty of new milk and butter. Why eat "dry toast" as you remark? After your meals take a dessertspoonful of Scott's Pure Cod Oil Emulsion with Hypophosphites thrice daily during the winter months, and clothe warmly in Forsyth's Woollen Clothing, 17, Renfield-street, Glasgow. Read the series of articles published in HEALTH, "How to get Thin or Fat," to be had on application to the publishers.

SUUM CUIQUE.—We should have thought the Cascara and Dahl's Cakes would have served the purpose you name. If not, follow advice given to "Tyro" in the present number. If the remedy you are now using is not effective continue the Cascara and Cakes, and substitute a little pure Hazeline as a lotion. Let us hear again from you, if not cured.

CYMRO JONES.—Read the pamphlet "A Lecture to Young Men" (of which the fifth edition has just been published), post free for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C., and note what is therein said about the use of tonics. Follow out the directions of the pamphlet; and write again, if not cured.

MARY TURNER.—1. No: it is only given for acidity, and can be of no service for the complexion. 2. If you will indicate what are the recipes you mean we will reply. 3. Probably you are simply over-sensitive to cold. Brace up your system, by taking a dessertspoonful of Thomson's Cod Oil Cream (advertised in our pages) twice daily. 4. Nothing except nutritious food and gymnastic exercises. 5. Any good druggist will inform you.

M. THOMS.—What you desire is an impossibility. To "dye your skin red" as you desire would not only be a most foolish but injurious procedure. You are simply suffering from nervousness, which you will outgrow. We judge you must be very young and inexperienced to suggest dyeing your skin. Take plenty of outdoor exercise, and look to your general health. You brood over your fancied trouble, and hence exaggerate it.

WALTER SCOTT. — Read carefully the pamphlet "A Lecture to Young Men,"—fifth edition,—post free for 1s. 1d, from Mr. Renshaw, 356, Strand, London, W.C., and note what is said therein about cases like yours. For the pimples, &c., read No. 199 HEALTH (price 4½d. post free, to be had from the publisher), and note the full advice therein in the article on "Blackheads and Acne." Use Bayley's Spermaceti Soap, 17, Cockspur-street, Pall-mall, London, S.W.

PSOR.—We will endeavour to adopt your suggestion at an early date. The topic is a very difficult one, and technical in its nature besides. You should try Vinolia as an application, to be had from Messrs. Roberts & Co., 76, New Bond-street, London, W.

COLUMBINE. — See advice given to "Psor" above. Let us hear your experience of the Vinolia, which has lately been highly recommended by medical men for the cure of itching.

SESAME—1. The separation cannot be avoided; you cannot mix oil and water, and the only way in which your preparation could be kept clear would be by emulsifying it. 2. The "Druggists' Recipe Book" will give you full particulars; published by Messrs. Churchill, 11, New Burlington-street, London, W. Any bookseller will procure it for you.

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